AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended): A satellite-based positioning receiver with correction of inter-satellite cross-correlation errors, ~~the receiver~~ comprising :_

a correlation channel Cii of order i per satellite received, with i=1,2,..N, N being the number of satellites received (Sat1, Sat2,...SatN)[[,]] :_

each correlator channel Cii having:

[[-]] a carrier correlation path [[(12)]], in-phase and quadrature, between the signal received ~~(Sr, Br)~~ and two respective local quadrature carriers (sine, cosine) generated by an oscillator with digital control of carrier ~~(NCO p)~~;

[[-]] a code correlation path [[(16)]] based on the signals I, Q output by the in-phase and quadrature carrier correlation path, with the local codes of the satellite received, provided by a digital generator of local codes; and

[[-]] an integrator [[(20)]] for providing, for each local code, signals $I_c Q_c$ at the output of the correlator channel Cii of the satellite received, c designating each of the local codes,

~~characterized in that it comprises,~~ wherein for each correlator channel Cii of the satellite received as many additional correlator channels Cix as additional satellites received with x=1,2,...N and x different from i, and in that the local codes of the satellite received are correlated with the local codes of the other additional satellites Cix.

2. (currently amended): The satellite-based positioning receiver as claimed in claim 1, ~~characterized in that~~ wherein the local codes of the satellite received for the code correlation path ~~(16, 56)~~ are a punctual code and a delta code, the code correlation path ~~in fact comprising~~ including two correlation paths:

[[-]] a punctual path (I_P, Q_P),

[[-]] a delta path (I_Δ, Q_Δ).

3. (currently amended): The satellite-based positioning receiver as claimed in claim 1, ~~characterized in that~~ wherein the local codes of the satellite received for the code correlation path ~~(16, 56)~~ are a punctual code, an early code and a late code, and in that the integrator [[(20)]] provides signals $(I_P, Q_P, I_A, Q_A, I_R, Q_R)$, the code correlation path comprising three correlation paths:

[[-]]   an early path (I_A, Q_A),

[[-]]   a punctual path (I_P, Q_P), and

[[-]]   a late path (I_R, Q_R), the delta path being reconstituted from the early path minus the late path by the formulae:

$$I_\Delta = I_A - I_R$$
$$Q_\Delta = Q_A - Q_R$$

4. (currently amended): The satellite-based positioning receiver as claimed in ~~either of~~ claim[[s]] 1 ~~or 2, characterized in that~~ wherein it ~~comprises~~ comprising N reception subsets Si, each subset Si of rank i having the correlator channel Cii of the signal of the satellite received of order i and N-1 additional correlator channels Ci1,Ci2,..Cix,...CiN for the additional satellites received, x = 1,2,...N and x different from i, each received signal correlator channel Cii being driven by its reception input [[(Er)]] by the signal received [[(Sr)]], each of the additional correlator channels of a subset Si, receiving respectively, on the one hand, at its received-signal input [[(Er)]], a local signal Slox resulting from the modulation of the local carrier [[(F_{lx})]] by the punctual local code [[(Cpx)]] of the correlator channel Cxx of the satellite received of order x, and on the other hand, at its local carrier and local codes local inputs, the respective local quadrature carriers ~~(F_{Ii}, F_{Qi})~~ and the local codes ~~(Cpi and Ai)~~ of the correlator channel [[(Cii)]] of the signal received from the satellite of order i.

5. (currently amended): The satellite-based positioning receiver as claimed in claim 4, ~~characterized in that~~ wherein each correlator channel Cix of rank x in the subset Si, with x=1,2,...N, comprises:

[[-]] the in-phase and quadrature carrier correlation path [[(12)]] between the signal received and two respective quadrature local carriers (sine, cosine);

[[-]] the code correlation path [[(16)]] based on the signals I, Q at the output of the in-phase and quadrature carrier correlation path with the punctual [[(Cpi)]] and delta (Δi) local codes of the satellite of order i;

[[-]] an integrator (20) for providing signals I_{Pix}, $I_{\Delta ix}$,Q_{Pix},$Q_{\Delta ix}$ at the output of the correlator channel,

the subset Si furthermore comprising:

[[-]] an oscillator with digital control of carrier (OPi)(NCO p) for providing local carriers F_{Ii}, F_{Qi} for the N correlators of the subset Si considered and a digital generator of local codes [[(OCi)]] for providing the local codes, punctual [[(Cpi)]] and delta [[(Δi)]], for the N correlators of the subset Si considered;

[[-]] a multiplier Mi providing for the other subsets Sx of the receiver a local signal [[(Sloi)]], resulting from the modulation of the local carrier [[(F_{Ii})]] by the punctual code [[(Cpi)]] of the subset considered Si, so as to perform the correlation of the code modulated by the carrier of the satellite considered with the codes modulated by the carriers of the other satellites;

[[-]] a correlation corrector CRi providing on the basis of the signals I_{Pix},$I_{\Delta ix}$,Q_{Pix},$Q_{\Delta ix}$ at the output of the N correlator channels of the subset considered [[(Si)]], x taking, for these signals I_{Pix},$I_{\Delta ix}$,Q_{Pix},$Q_{\Delta ix}$, the values 1 to N, and signals I_{Pxx}, I_{Qxx} output by the received-signal correlator channels Cxx of the other subsets Sx, corrected signals I_{Pi}',$I_{\Delta i}'$,Q_{Pi}',$Q_{\Delta i}'$;

[[-]] a carrier discriminater DPi providing through a carrier loop corrector CBPi a control signal Vcpi for the oscillator with digital control of carrier (NCO p) so as to provide local carriers (F$_{Ii}$,F$_{Qi}$) for the N correlators of the subset Si considered;

[[-]] a code loop discriminator DCi providing through a code loop corrector CBCi a control signal Vcci for the digital generator of local codes (OCi) (NCO c) for providing the local codes, punctual [[(Cpi)]] and delta [[(Δi)]] for the N correlators of the subset Si considered.

6. (currently amended): The satellite-based positioning receiver as claimed in one of claim[[s]] 1 to 5, characterized in that wherein it comprises a first [[(S1)]], a second [[(S2)]] and

a third [[(S3)]] reception subset having three correlator channels each for receiving three satellites.

7. (currently amended): The satellite-based positioning receiver as claimed in claim 6, ~~characterized in that~~ <u>wherein</u> the first [[(S1)]], second [[(S2)]], and third subsets [[(S3)]] of the receiver respectively comprise a first [[(C11)]], a second [[(C22)]] and a third [[(C33)]] signal correlator channels driven at their reception input [[(Er)]] by the signal Sr received by the receiver, each subset furthermore comprising:

[[-]] in the first subset [[(S1)]], two other additional correlator channels ~~C12 and C13~~ driven respectively at their reception input by local signals ~~Slo2, Slo3~~ emanating respectively from a multiplier [[M2]] and from a multiplier [[M3]], the signal [[Slo2]] resulting from the modulation of the local carrier F_{I2} by the punctual code [[Cp_2]] of the second satellite and the signal Slo3 resulting from the modulation of the local carrier F_{I3} by the punctual code [[Cp_3]]of the third satellite;

[[-]] in the second subset [[(S2)]], two other additional correlator channels [[C21]] and [[C23]] driven respectively at their reception input by local signals ~~Slo1, Slo3~~ emanating respectively from a multiplier [[M1]] and from a multiplier [[M3]], the signal [[Slo1]] resulting from the modulation of the local carrier F_{I1} by the punctual code [[Cp_1]] of the first satellite;

[[-]] in the third subset [[(S3)]], two other additional correlator channels [[C31]] and [[C32]] driven at their reception input by the local signals ~~Slo1, Slo2~~ emanating respectively from the multipliers [[M1]] and [[M2]];

each correlator of each of the subsets comprising:

[[-]] the in-phase and quadrature carrier correlation path [[(12)]] between the signal at their reception input and two respective quadrature local carriers (sine, cosine), F_{I1}, F_{Q1} for the first subset [[(S1),]] F_{I2}, F_{Q2} for the second [[(S2)]] and F_{I3}, F_{Q3} for the third [[(S3)]], these carriers being generated respectively, for each of the subsets ~~(S1, S2 and S3)~~ by a first [[(OP1)]], a second [[(OP2)]] and a third [[(OP3)]] oscillators with digital control of carrier [[(NCO p)]];

[[-]] the code correlation path [[(16)]] based on the signals I, Q at the output of the in-phase and quadrature carrier correlation path with the local codes, punctual ~~(Cp1, Cp2, Cp3)~~ and delta ~~(Δ1, Δ2, Δ3)~~ of the satellites respectively of order 1, 2, 3, provided by a digital generator of

local codes (OC1, OC2 and OC3) respectively for each subset;

[[-]]   an integrator per correlator channel for respectively providing signals $I_{P1x},I_{\Delta1x},Q_{P1x},Q_{\Delta1x}$ at the output of the correlator channel C1x; $I_{P2x},I_{\Delta2x},Q_{P2x},Q_{\Delta2x}$ at the output of the correlator channel C2x and $I_{P3x},I_{\Delta3x},Q_{P3x},Q_{\Delta3x}$ at the output of the correlator channel C3x, with x=1,2,3,

each subset of three correlators comprising:

[[-]]   a corrector (Cr1,Cr2,Cr3) of correlations providing on the basis of the signals $I_{Pix},I_{\Delta ix},Q_{Pix},Q_{\Delta ix}$, with i=1,2,3, at the output of the N correlator channels of the subset considered (S1,S2,S3) and of the signals I_{Pxx},Q_{Pxx}, at the output of the received-signals correlator channels (of order x) of the other subsets (Sx), of the corrected signals $I_{P1}',I_{\Delta1}',Q_{P1}',Q_{\Delta1}'$ at the output of the first corrector $Cr1,I_{P2}',I_{\Delta2}',Q_{P2}',Q_{\Delta2}'$ at the output of the second corrector $Cr2,I_{P3}',I_{\Delta3}',Q_{P3}',Q_{\Delta3}$ at the output of the third corrector [[Cr3]], the signals I_{Pxx},Q_{Pxx} at the output of the received-signal correlator channels, driving the correctors, being the signals $I_{P22},I_{P33},Q_{P22},Q_{P33}$ for the corrector $Cr1,I_{P11},I_{P33},Q_{P11},Q_{P33}$ for the corrector [[Cr2]] and $I_{P11},I_{P22},Q_{P11},Q_{P22}$ for the corrector [[Cr3]],

[[-]]   a carrier discriminator (DP1,DP2,DP3) respectively providing through a carrier loop corrector (CBP1,CBP2,CBP3) a control signal (Vcp1,Vcp2,Vcp3) for the respective oscillator with digital control of carrier (OP1,OP2,OP3) (NCO-p) so as to provide local carriers F_{I1},F_{Q1}, for the first subset [[(S1),]] F_{I2},F_{Q2} for the second subset [[(S2)]] and F_{I3},F_{Q3} for the third subset [[(S3)]];

[[-]]   a code loop discriminator (DC1,DC2,DC3) respectively providing through a code loop corrector (CBC1,CBC2,CBC3) a respective control signal Vcc1,Vcc2,Vcc3 for the digital generator of local codes (OC1,OC2,OC3) (NCO-c) so as to provide the local codes, punctual and delta (Cp1,Δ1) for the three correlators of the first subset (S1), (Cp2,Δ2) for the three correlators of the second subset [[(S2)]] and (CP3,Δ3) for the three correlators of the third subset [[(S3)]].

8. (currently amended): The satellite-based positioning receiver as claimed in either-of claim[[s]] 6 or 7, characterized in that wherein it is configured to perform the following corrections:

for the first satellite Sat1:

[[-]] on the punctual path:

$$I_{P1}' = I_{P11} - I_{P22} \cdot I_{P12} \cdot 2/T - I_{P33} \cdot I_{P13} \cdot 2/T$$
$$Q_{P1}' = Q_{P11} - I_{P22} \cdot Q_{P12} \cdot 2/T - I_{P33} \cdot Q_{P13} \cdot 2/T$$

[[-]]   on the delta path:

$$I_{\Delta1}' = I_{\Delta11} - I_{P22} \cdot I_{\Delta12} \, 2/T - I_{P33} \cdot I_{\Delta13} \cdot 2/T$$
$$Q_{\Delta1}' = Q_{\Delta11} - I_{P22} \cdot Q_{\Delta12} \, 2/T - I_{P33} \cdot Q_{\Delta13} \cdot 2/T$$

[[-]]   i.e. in complex notation, with $j^2 = -1$:

$$I_{P1}' + jQ_{P1}' = I_{P11} + jQ_{P11} - I_{P22}(I_{P12} + jQ_{P12}) \cdot 2/T - I_{P33}(I_{P13} + jQ_{P13}) \cdot 2/T$$
$$I_{\Delta1}' + jQ_{\Delta1}' = I_{\Delta11} + jQ_{\Delta11} - I_{P22}(I_{\Delta12} + jQ_{\Delta12}) \cdot 2/T - I_{P33}(I_{\Delta13} + jQ_{\Delta13}) \cdot 2/T$$

$$\text{with } \frac{T}{2} = \int_0^T (local\ signal(t))^2\, dt,$$

T integration period of the
integrator (20).

9. (currently amended): The satellite-based positioning receiver as claimed in ~~one of~~ claim[[s]] 5 ~~to 8, characterized~~ wherein in that in the case where the local carriers are not entirely in phase with the carriers received it is shown that:

for the first satellite Sat1:

[[-]] on the punctual path:

$$I_{P1}' = I_{P11} - (I_{P22} \cdot I_{P12} - Q_{P22} \cdot Q_{P12}) \cdot 2/T - (I_{P33} \cdot I_{P13} - Q_{P33} \cdot Q_{P13}) \cdot 2/T$$
$$Q_{P1}' = Q_{P11} - (I_{P22} \cdot Q_{P12} + Q_{P22} \cdot I_{P12}) \cdot 2/T - (I_{P33} \cdot Q_{P13} + Q_{P33} \cdot I_{P13}) \cdot 2/T$$

[[-]] on the delta path:

$$I_{\Delta1}' = I_{\Delta11} - (I_{P22} \cdot I_{\Delta12} - Q_{P22} \cdot Q_{\Delta12}) \cdot 2/T - (I_{P33} \cdot I_{\Delta13} - Q_{P33} \cdot Q_{\Delta13}) \cdot 2/T$$
$$Q_{\Delta1}' = Q_{\Delta11} - (I_{P22} \cdot Q_{\Delta12} + Q_{P22} \cdot I_{\Delta12}) \cdot 2/T - (I_{P33} \cdot Q_{\Delta13} + Q_{P33} \cdot I_{\Delta13}) \cdot 2/T$$

[[-]] i.e. in complex notation, with $j^2 = -1$:

$$I_{P1}' + jQ_{P1}' = I_{P11} + jQ_{P11} - (I_{P22} + jQ_{P22})(I_{P12} + jQ_{P12})2/T - (I_{P33} + jQ_{P33})(I_{P13} + jQ_{P13})2/T$$
$$I_{\Delta1}' + jQ_{\Delta1}' = I_{\Delta11} + jQ_{\Delta11} - (I_{P22} + jQ_{P22})(I_{\Delta12} + jQ_{\Delta12})2/T - (I_{P33} + jQ_{P33})(I_{\Delta13} + jQ_{\Delta13})2/T$$

for the second satellite Sat2:

$$I_{P2}' + jQ_{P2}' = I_{P22} + jQ_{P22} - (I_{P11} + jQ_{P11})(I_{P21} + jQ_{P21})2/T - (I_{P33} + jQ_{P33})(I_{P23} + jQ_{P23})2/T$$
$$I_{\Delta2}' + jQ_{\Delta2}' = I_{\Delta22} + jQ_{\Delta22} - (I_{P11} + jQ_{P11})(I_{\Delta21} + jQ_{\Delta21})2/T - (I_{P33} + jQ_{P33})(I_{\Delta23} + jQ_{\Delta23})2/T$$

and in that for the third satellite Sat3:

$$I_{P3}' + jQ_{P3}' = I_{P33} + jQ_{P33} - (I_{P11} + jQ_{P11})(I_{P31} + jQ_{P31})2/T - (I_{P22} - jQ_{P22})(I_{P32} + jQ_{P32})2/T$$
$$I_{\Delta3}' + jQ_{\Delta3}' = I_{\Delta33} + jQ_{\Delta33} - (I_{P11} + jQ_{P11})(I_{\Delta31} + jQ_{\Delta31})2/T - (I_{P22} - jQ_{P22})(I_{\Delta32} + jQ_{\Delta32})2/T$$

and in that generally:

[[-]] on the punctual path:

$$I_{Pi}' = I_{Pii} - \Sigma_{\text{on x different from i}} (I_{Pxx} . I_{Pix} - Q_{Pxx} . Q_{Pix}) . 2/T$$
$$Q_{Pi}' = Q_{Pii} - \Sigma_{\text{on x different from i}} (I_{Pxx} . Q_{Pix} + Q_{Pxx} . I_{Pix}) . 2/T$$

[[-]] on the delta path:

$$I_{\Delta i}' = I_{\Delta ii} - \Sigma_{\text{on x different from i}} (I_{Pxx} . I_{\Delta ix} - Q_{Pxx} . Q_{\Delta ix}) . 2/T$$
$$Q_{\Delta i}' = Q_{\Delta ii} - \Sigma_{\text{on x different from i}} (I_{Pxx} . Q_{\Delta ix} + Q_{Pxx} . I_{\Delta ix}) . 2/T$$

i.e. in complex notation, with $j^2 = -1$:

$$I_{Pi}' + j Q_{Pi}' = I_{Pii} + j Q_{Pii} - \Sigma_{\text{on x different from i}} (I_{Pxx} + jQ_{Pxx})(I_{Pix} + jQ_{Pix})2/T$$
$$I_{\Delta i}' + j Q_{\Delta i}' = I_{\Delta ii} + j Q_{\Delta ii} - \Sigma_{\text{on x different from i}} (I_{Pxx} + jQ_{Pxx})(I_{\Delta ix} + jQ_{\Delta ix})2/T$$

10. (currently amended): The satellite-based positioning receiver as claimed in ~~one of~~ claim[[s]] 1 ~~to 5, characterized~~ wherein in that each correlator channel [[(50)]] operates with a signal received (Br) in baseband, in the form of two signals I and Q in quadrature.

11. (currently amended): The satellite-based positioning receiver as claimed in claim 10, ~~characterized in that~~ <u>wherein</u> the baseband correlator channel [[(50)]] comprises an in-phase and quadrature correlation path [[(52)]] between the baseband signal received, in the form of two signals I and Q in quadrature, and two respective local carriers F_I, F_Q, these local quadrature carriers (sine, cosine) being generated by an oscillator with digital control of carrier ~~(54) (NCO p)~~ of the receiver.

12. (currently amended): The satellite-based positioning receiver as claimed in claim 11, ~~characterized in that~~ <u>wherein</u> the baseband receiver comprises N reception subsets for N satellites received, each subset Si of rank i, with i=1,2,3,...N, comprises a correlator channel Cii for a satellite received Sati and N-1 additional correlators Ci1,Cix,...CiN for the additional satellites Sat1,Satx,...SatN, with x different from i, the correlator channel Cii and the additional channels of each subset Si furthermore comprising:

[[-]] a first MIi and a second MQi multipliers providing for the other subsets of the receiver a first SLIi and a second SLQi local signals resulting from the modulation of the quadrature signals F_{Qi} and FIi of the local carrier by the punctual code Cpi of the subset considered, so as to perform the correlation of the code modulated by the carrier of the satellite considered with the codes modulated by the carrier of the other satellites.

13. (currently amended): The satellite-based positioning receiver as claimed in ~~one of~~ claim[[s]] 10 ~~to 12, characterized in that~~ <u>wherein</u> it is configured to perform the following corrections:

for the first satellite Sat1:

$$I_{P1}' + jQ_{P1}' = I_{P11} + jQ_{P11} - (I_{P22} + jQ_{P22})(I_{P12} + jQ_{P12})/T - (I_{P33} + jQ_{P33})(I_{P13} + jQ_{P13})/T$$
$$I_{\Delta 1}' + jQ_{\Delta 1}' = I_{\Delta 11} + jQ_{\Delta 11} - (I_{P22} + jQ_{P22})(I_{\Delta 12} + jQ_{\Delta 12})/T - (I_{P33} + jQ_{P33})(I_{\Delta 13} + jQ_{\Delta 13})/T$$

14. (currently amended): The satellite-based positioning receiver as claimed in ~~one of~~ claim[[s]] 3 ~~to 13, characterized in that~~ <u>wherein</u> the delta path is reconstituted at the output of the

correlators by the formulae:

$$I_{\Delta ix} = I_{Aix} - I_{Rix}$$
$$Q_{\Delta ix} = Q_{Aix} - Q_{Rix}$$

15. (currently amended): The satellite-based positioning receiver as claimed in ~~one of~~ claim[[s]] 1 ~~to 13, characterized in that,~~ wherein to economize on correlators, the cross-correlations are calculated by:

[[-]] for the first satellite Sat1, by $(I_P,I_\Delta,Q_P,Q_\Delta)_{12}$ and $(I_P,I_\Delta,Q_P,Q_\Delta)_{13}$ in addition to $(I_P,I_\Delta,Q_P,Q_\Delta)_{11}$

$$I_{P1}' + jQ_{P1}' = I_{P11} + jQ_{P11} - (I_{P22} + jQ_{P22})(I_{P12} + j\,Q_{P12})/T - (I_{P33} + j\,Q_{P33})(I_{P13} + jQ_{P13})/T$$
$$I_{\Delta 1}' + jQ_{\Delta 1}' = I_{\Delta 11} + jQ_{\Delta 11} - (I_{P22} + jQ_{P22})(I_{\Delta 12} + jQ_{\Delta 12})/T - (I_{P33} + jQ_{P33})(I_{\Delta 13} + jQ_{\Delta 13})/T$$

[[-]] for the second satellite Sat2, by $(I_P,I_\Delta,Q_P,Q_\Delta)_{23}$ in addition to $(I_P,I_\Delta,Q_P,Q_\Delta)_{22}$

$$I_{P2}' + jQ_{P2}' = I_{P22} + jQ_{P22} - (I_{P11} + jQ_{P11})(I_{P12} - jQ_{P12})/T - (I_{P33} + jQ_{P33})(I_{P23} + jQ_{P23})/T$$
$$I_{\Delta 2}' + jQ_{\Delta 2}' = I_{\Delta 22} + jQ_{\Delta 22} + (I_{P11} + jQ_{P11})(I_{\Delta 12} - jQ_{\Delta 12})/T - (I_{P33} + jQ_{P33})(I_{\Delta 23} + jQ_{\Delta 23})/T$$

and in that for the third satellite Sat3, nothing is calculated in addition to $(I_P,I_\Delta,Q_P,Q_\Delta)_{33}$

$$I_{P3}' + jQ_{P3}' = I_{P33} + jQ_{P33} - (I_{P11} + jQ_{P11})(I_{P13} - jQ_{P13})/T - (I_{P22} + jQ_{P22})(I_{P23} - jQ_{P23})/T$$
$$I_{\Delta 3}' + jQ_{\Delta 3}' = I_{\Delta 33} + jQ_{\Delta 33} + (I_{P11} + jQ_{P11})(I_{\Delta 13} - jQ_{\Delta 13})/T + (I_{P22} + jQ_{P22})(I_{\Delta 23} - jQ_{\Delta 23})/T$$

and in that by generalizing t, for x > i:

$$I_{Pxi} = + I_{Pix}$$
$$Q_{Pxi} = - Q_{Pix}$$
$$I_{\Delta xi} = - I_{\Delta ix}$$
$$Q_{\Delta xi} = + Q_{\Delta ix}$$

16. (currently amended): The satellite-based positioning receiver as claimed in ~~one of~~ claim[[s]] 1 ~~to 15, characterized in that~~ wherein in order to improve the accuracy of the estimation of the complex amplitude of the signals received respectively from the satellites i, the terms I_{Pii} and Q_{Pii} in the formulae are replaced with the terms I_{Pi}' and Q_{Pi}', the formulae then

becoming:

$$I_{Pi}' + j\,Q_{Pi}' = I_{Pii} + j\,Q_{Pii} - \Sigma_{\text{on x different from i}}\,(I_{Px}'+ jQ_{Px}')(I_{Pix}+ jQ_{Pix})2/T$$
$$I_{\Delta i}' + j\,Q_{\Delta i}' = I_{\Delta ii} + j\,Q_{\Delta ii} - \Sigma_{\text{on x different from i}}\,(I_{Px}'+ jQ_{Px}')(I_{\Delta ix}+ jQ_{\Delta ix})2/T$$

17. (currently amended): The satellite-based positioning receiver as claimed in claim 16, ~~characterized in that,~~ wherein at each iteration of the calculation, the corrected terms I_{Pi}' and Q_{Pi}' of the previous iteration are used, initializing the calculation with uncorrected terms I_{Pii} and Q_{Pii}, after the acquisition and convergence phase:

$$(I_{Pi}' + j\,Q_{Pi}')_n = (I_{Pii} + j\,Q_{Pii})_n - \Sigma_{\text{on x different from i}}\,(I_{Px}'+ jQ_{Px}')_{n-1} .(I_{Pix}+ jQ_{Pix})_n . 2/T$$
$$(I_{\Delta i}' + j\,Q_{\Delta i}')_n = (I_{\Delta ii} + j\,Q_{\Delta ii})_n - \Sigma_{\text{on x different from i}}\,(I_{Px}'+ jQ_{Px}')_{n-1} .(I_{\Delta ix}+ jQ_{\Delta ix})_n . 2/T$$

18. (currently amended): The satellite-based positioning receiver as claimed in ~~any one of~~ claim[[s]] 1 ~~to 17, characterized~~ wherein in that when the signal received is filtered (limited spectrum), the same filtering is applied to the local signals.

19. (currently amended): The satellite-based positioning receiver as claimed in ~~one of~~ claim[[s]] 1 ~~to 18, characterized~~ wherein in that a first satellite is acquired, without correction, by a conventional open-loop search process, in that on completion of this process we switch to tracking, we deduce therefrom the local signal of this first satellite and we correct the cross-correlations on the other channels in the search phase (in open loop) and in that each time a new satellite is acquired and tracked, we calculate and we apply the cross-correlation corrections in respect of the measurements of all the other satellites already tracked.